The purpose of the MS-only program is to produce graduates who will fill positions in research and development in the field of biomedical engineering or pursue further formal education. Graduates may expect to seek employment on the research staffs of engineering schools, medical schools, hospitals, industrial firms, and government laboratories.

We have three different Master's programs all of which lead to an MS (switching between these programs, once started, requires approval of the Director of the MS Program):

(i) Master's degree without thesis
(ii) Master's degree with thesis
(iii) A combined BS/MS program with or without Master's thesis

Completion of the Master's degree program may take as little as three quarters, if done without a thesis. With a thesis, a typical time for completion would be 2 years.

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**Personnel**

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**Degree Requirements**

We have three different Master’s programs all of which lead to an MS (switching between these programs, once started, requires approval of the Director of the MS Program):

(i) Master's degree without thesis  
(ii) Master's degree with thesis  
(iii) A combined BS/MS program with or without Master's thesis

Completion of the Master's degree program may take as little as three quarters, if done without a thesis. With a thesis, a typical time for completion would be 2 years. Thesis students qualify for enrollment of TGS512 after completing coursework which offers full-time status for $100 per quarter. Please see [http://www.tgs.northwestern.edu/about/policies/general-registration-policies.html](http://www.tgs.northwestern.edu/about/policies/general-registration-policies.html) for more information about TGS512.

Graduate programs are administered by The Graduate School, so there are both The Graduate School and Biomedical Engineering Department requirements to satisfy for the degree. The detailed requirements of The Graduate School include but may not be limited to:

(i) Three quarters of residence at Northwestern.  
(ii) A grade average for all work presented for the degree of at least B (3.0).  
(iii) All courses taken for graduate credit must be listed in the Graduate School course career (e.g. BME 301 does not qualify for graduate credit).

**MS Degree without Thesis**

The requirements for the degree of Master of Science (without thesis) are as follows:

1. Completion of at least twelve 300-level or higher graduate courses (but no more than two units of 499; only 1 unit of 499 may be taken for credit in one term). All courses must be for a letter grade. Students must take the 495 version of all 395/495 combined courses. These courses must include a core curriculum of:

   (i) At least two of the following courses: BME 401, 402, 403. Previous credit can be established for these courses by filing a petition approved by the Director of the MS Program, but if so, they must be replaced with other advanced life science courses. In order to successfully petition out of a physiology course, the student must have taken rigorous course covering the same topical area. The
student must submit the petition form, syllabus of similar course, and transcript to the Director of
the MS Program when the Plan of Study is initially reviewed (during the fall quarter of the first year).

(ii) One advanced statistics course from the following list or approved by the Director of the MS
Program. If the student has not taken a basic statistics course, the student may be required to
complete a basic statistics course such as STAT 330-1 or IEMS 303. The basic statistics course will
count towards the student’s restricted electives.

a. BME495 Experimental Design and Measurement
b. STAT 350-0 Regression Analysis
c. STAT 351-0 Design and Analysis of Experiments
d. NUIN 408-0 - Quantitative Methods and Experimental Design
e. Other courses with approval from Director of MS Program

(iii) Three math or quantitative engineering and science courses from the following list or approved by
the Director of the MS Program. These courses should have a significant mathematical component
(e.g., math-intensive problem sets, etc.) Note that students should review course syllabi to avoid
repeating courses similar to those taken at another institution.

a. Any ES_APPM including:
   i. ES_APPM 395 (Introduction to Applied Partial Differential Equations)
b. BME 366 Biomechanics of Movement
c. BME 371 Mechanics of Biological Tissues
d. BME 478 Transport Fundamentals
e. EECS 328 Numerical Methods for Engineers
f. EECS 359 Digital Signal Processing
g. ESAM 370 Introduction to Computational Neuroscience
h. ME 314 Theory of Machines – Dynamics
   i. BME 461 Computation Neuromechanics and Neuroethology
   j. Other Courses with Approval from Director of MS Program

For those students that do not have an adequate mathematics background, in areas such as linear
algebra, multivariate calculus, and differential equations, additional courses may also be required at
the discretion of the Director of the MS Program. Background math courses must be graduate
courses in order to be counted towards the restricted elective count.

(iv) Of the remaining courses, at least four must be engineering or science courses that complement
other coursework. Courses in the following areas may not count: research for credit (BME499),
global health (except BME380), business, design, NUVention (except for 1 quarter of NUVention
Medical), seminar, or survey courses. To clarify, NUVention Medical is a two-quarter sequence
where one quarter may count as an engineering course. The second quarter would fulfill a course in
category (v). BME380 will count as an engineering course.

(v) The remaining two courses may be any graduate level course that complement the student’s
coursework including NUVention, research for credit, global health, business, and design courses.
These two “restricted elective” courses must be approved by the Director of the MS Program.

(vi) Seven of the 12 courses taken must be engineering courses. Courses focused on business, design,
global health (except BME380), research for credit (BME499), or survey courses will not count
towards these 7 courses. With respect to BME499, students must determine expectations from
advisor at the beginning of the quarter and turn in deliverable prior to grades.

2. All students are required to complete BMD_ENG 512 in the fall, winter and spring quarter of their
first year. Upon petition to the Graduate Committee, a student may be exempt from one quarter of BMD_ENG 512 if the student is enrolled in a class that meets in conflict with BMD_ENG 512. Exemption will require the student to complete additional work related to the topics covered during the class.

3. A student can satisfy The Graduate School requirement for a comprehensive final exam in one of two ways: 1) completion of a project (a minimum of one BMD_ENG 499) that includes a written report (length 25 pages or more) approved by a faculty member in the BME department, or 2) completion of three classes with significant project components from a list provided in September of each year. Courses not listed will be reviewed on an individual basis. Significant project components include but are not limited to: 10+-page paper, slides from a 20-min presentation, etc.

4. Students are required to submit a plan of study, consistent with the above guidelines, no later than the beginning of October. This plan must be approved by the academic advisor. Note that this is just an initial plan; appropriate changes can be made with approval of the advisor and the Graduate Program Chair. Failure to submit the plan on time or to follow the approved plan may lead to a delay in graduation.

5. All first year students engaging in research are required to take Responsible Conduct of Research Training through CITI.

Timeline for MS Degree without Thesis

**Fall Quarter**

**End of September** – Indicate anticipated degree path on GSTS.

**Beginning of October** – Submit initial plan of study through GSTS. Submit petitions and associated paperwork to the Director of the MS Program for approval prior to approval of the plan of study. Signed petitions must be uploaded to GSTS under the “Document” section.

**End of Quarter** – Upload project deliverables to GSTS.

**Winter Quarter**

**Week 5** – Indicate intent to graduate to the Director of the MS Program and Graduate Program Assistant

**End of Quarter** – Upload project deliverables to GSTS.

**Spring Quarter**

**By Deadline on Academic Calendar** – Complete Application for Degree.

**By 1 Week prior to Deadline on Academic Calendar** – Complete Master's Completion Form and upload deliverables for project courses.
The requirements for the degree of Master of Science (with thesis) are as follows:

1. Completion of at least nine 300-level or higher graduate courses (but no more than 1 unit of 499). All courses must be for a letter grade. Students must take the 495 version of all 395/495 combined courses. These courses must include a core curriculum of:
   
   (i) At least two of the following courses: BME 401, 402, 403. Previous credit can be established for these courses by filing a petition approved by the Director of the MS Program, but if so, they must be replaced with other advanced life science courses. In order to successfully petition out of a physiology course, the student must have taken a similarly rigorous course covering the same topical area. The student must submit the petition form, syllabus of similar course, and transcript to the Director of the MS Program when the Plan of Study is initially reviewed (during fall quarter).
   
   (ii) One advanced statistics course from the following list or approved by the Director of the MS Program. If the student has not taken a basic statistics course, the student may be required to complete a basic statistics course such as STAT 330-1 or IEMS 303. The basic statistics course will count towards the student’s restricted electives.
      
      a. BME495 Experimental Design and Measurement
      b. STAT 350-0 Regression Analysis
      c. STAT 351-0 Design and Analysis of Experiments
      d. NUIN 408-0 - Quantitative Methods and Experimental Design
      e. Other courses with approval from Director of MS Program
   
   (iii) Three math or quantitative engineering and science courses from the following list or approved by the Director of the MS Program. These courses should have a significant mathematical component (e.g., math intensive problem sets, etc.) Note that students should review course syllabi to avoid repeating courses similar to those taken at another institution.
      
      a. Any ES_APPM including:
         i. ES_APPM 395 (Introduction to Applied Partial Differential Equations)
      b. BME 366 Biomechanics of Movement
      c. BME 371 Mechanics of Biological Tissues
      d. BME 478 Transport Fundamentals
      e. EECS 328 Numerical Methods for Engineers
      f. EECS 359 Digital Signal Processing
      g. ESAM 370 Introduction to Computational Neuroscience
      h. ME 314 Theory of Machines – Dynamics
         i. BME 461 Computation Neuromechanics and Neuroethology
      j. Other Courses with Approval from Director of MS Program
   
   For those students that do not have an adequate mathematics background, in areas such as linear algebra, multivariate calculus, and differential equations, additional courses may also be required at the discretion of the Director of the MS Program. Background math courses must be graduate courses in order to be counted towards the restricted elective count.

   (iv) Of the remaining courses, at least 2 must be engineering or science courses that complement other coursework. Courses in the following areas may not count: research for credit (BME499), global health (except BME380), business, design, NUvention (except for 1 quarter of NUvention Medical),
seminar, or survey courses. To clarify, NUvention Medical is a two-quarter sequence where one quarter may count as an engineering course. The second quarter would fulfill a course in category (v). BME380 will count as an engineering course.

(v) The remaining course may be any graduate level course that complement the student’s coursework including NUvention, research for credit, global health, business, and design courses. This “restricted elective” course must be approved by the Director of the MS Program.

(vi) 5 of the 9 courses taken must be engineering courses. Courses focused on business, design, global health (except BME380), research for credit (BME499), or survey courses will not count towards these 5 courses. With respect to BME499, students must determine expectations from advisor at the beginning of the quarter and turn in deliverable prior to grades.

2. All students are required to complete BMD_ENG 512 in the fall, winter and spring quarter of their first year. Upon petition to the Graduate Committee, a student may be exempt from one quarter of BMD_ENG 512 if the student is enrolled in a class that meets in conflict with BMD_ENG 512. Exemption will require the student to complete additional work related to the topics covered during the class.

3. Students are required to submit a plan of study, consistent with the above guidelines, no later than the beginning of October. This plan must be approved by the academic advisor. Note that this is just an initial plan; appropriate changes can be made with approval of the advisor and the Graduate Program Chair. Failure to submit the plan on time or to follow the approved plan may lead to a delay in graduation.

4. All first year students engaging in research are required to take Responsible Conduct of Research Training through CITI.

5. Students are required to complete and defend a Master’s thesis to satisfy the requirement for a comprehensive exam. An examination committee for an MS thesis consists of at least three faculty members with one, including the chair, from core faculty from the department, a minimum of two, including the chair, from The Graduate School faculty, and a minimum of two who are full-time members of the Northwestern faculty. All committees must be approved by the department during the spring quarter of the first year. If a student selects a research advisor who does not have an appointment in the Biomedical Engineering Department, it is incumbent upon the student to select a faculty member within the department who will chair the examination committee. Further, the student should meet and confer regularly with the committee chair regarding coursework and research progress. The student must submit a signed copy of his/her Committee Update slides to GSTS no later than halfway through the quarter before the quarter the student wishes to graduate.

6. Please note that transitions from the MS program to the PhD program are very rare. The application for transfer is only open to students in the MS with thesis option, and only students who have already entered the second year of study will be considered. Interested students must have a MS GPA greater than 3.5 to be considered; though a GPA of 3.5 does not guarantee admission. Please submit the following with your application by December 15:

- 3 new recommendation letters (These should not be the letters that you submitted with your MS application. One letter should be from the faculty member who will serve as your advisor and must include a commitment to provide full funding for the duration of the PhD. Transfer students are not eligible for departmental fellowships.)

- Statement of research that you plan to do in the PhD program (1 page max)

- Northwestern transcript

- Plan of study for all remaining courses relevant to the PhD

In addition, please have your advisor send a letter of support with commitment of funding for your PhD career to the BME Director of Graduate Admissions (this can be sent care of nu-bme@northwestern.edu, but request that this be forwarded to the Director of Graduate Admissions).

Also, please conduct your MS thesis committee update by February 15th of the second year to evaluate research process.
7. An acceptable dissertation resulting from original research must conform to requirements set forth in by TGS. Alternatively, a submitted (but not necessarily approved) first author publication will suffice. Evidence of submission is required. Either the dissertation document or submitted, first-author paper with committee signatures must be submitted to GSTS one week prior to the Master’s Completion Form deadline.

Selecting an Advisor

At the orientation session, faculty and their research interests will be introduced. Based on their areas of interest, students should seek further information from relevant faculty to assist with the process of selecting a research laboratory for those completing the MS with thesis. The Director of the MS Program will be able to assist students in identifying appropriate faculty, as needed. Also during the fall quarter, a mentor matching event is held to facilitate pairing of thesis students with advisors. Those students participating in research are strongly encouraged, however, to consider possible areas of specialization before arriving on campus and to communicate directly with faculty members whose research interests match theirs. Research interests and phone numbers of faculty are given on our home page - <https://www.mccormick.northwestern.edu/biomedical/>. Further, MS projects are solicited from advisors and distributed to students prior to the mentor matching event. Meetings during the mentor matching event are made based on student project preference. Students should select their advisor halfway through the second quarter. Those students who do not have an advisor by spring quarter of their first year must switch to the non-thesis MS program.

Committee Formation

Committees must be comprised of 3 members that meet the following requirements:

- Two committee members must be part of the graduate school (typically tenure-track faculty).
- Two committee members must be full-time Northwestern Faculty.
- The committee chair must be core BME faculty (<http://www.mccormick.northwestern.edu/biomedical/people/faculty/>) and part of the Graduate School. If your primary research advisor is not part of the core BME faculty, please designate a core faculty member who is part of the Graduate School as your chair for administrative purposes and have your research advisor listed as co-chair.

Please list your advisor and committee in GSTS. Please send invitations to join the committee through GSTS. Once your committee members have accepted your invitation, please mark your committee as “complete” on GSTS and the Director of MS Program will review. Please have an approved committee by the spring quarter of the first year in the program. Any changes to the committee must be approved by the research advisor and implemented in GSTS.

Holding a Committee Update

Committee meetings must take place halfway through the quarter before the quarter the student wishes to graduate (i.e., ½ through Winter quarter for a Spring graduation).
- At the committee meeting, the student will typically present an introduction, 2-4 data slides, and future work with an expected timeline for completion.
- Committee members must sign a printout of the student’s slides and the student must upload this document to GSTS.

Holding the Defense

Students must coordinate a time for all 3 committee members to attend the thesis defense presentation. The completed thesis or submitted, first-author journal article must be emailed to the student’s committee 2 weeks in advance of the defense with the Director of the MS Program (casey.ankeny@northwestern.edu) cc’ed. The defense must be completed successfully and the thesis approved or first-author journal article submitted (with proof of submission) prior to submitting the Master’s Completion Form.

Thesis/Dissertation Requirements

Upon written recommendation from the thesis committee and following a thesis committee meeting, a final thesis defense can be scheduled. All thesis committee members and the Director of the MS program must receive a copy of the thesis at least two weeks prior to the defense. Failure to do so may result in the postponement of graduation. The thesis defense is open to all members of the Northwestern community and their guests.

An acceptable dissertation resulting from original research must conform to requirements set forth here: https://www.tgs.northwestern.edu/documents/policies/dissertation-format-guidelines.pdf#D%23Dissertation%20guidelines. All edits must be made in order for the Master’s Completion form can be approved. If edits are not completed by the internal Master’s Completion deadline, graduation will be postponed.

Timeline for MS Degree with Thesis

**Fall Quarter (Year 1)**

**Throughout** – Find an advisor.

**End of September** – Indicate the anticipated degree path on GSTS.

**Beginning of October** – Submit an initial plan of study through GSTS. Submit petitions and associated paperwork to the Director of the MS Program for approve prior to approval of the plan of study. Signed petitions must be uploaded to GSTS under the “Document” sections.

**Winter Quarter (Year 1)**

**Week 5** – Indicate the advisor on GSTS.
Spring Quarter (Year 1)

Beginning of Quarter – Begin research.

5 week – Submit the committee to GSTS.

Summer Quarter (Year 1)

Throughout – Perform research.

Fall Quarter (Year 2)

Throughout – Perform research.

Winter Quarter (Year 2)

Week 5 – Conduct the committee update, upload the signed slides to GSTS, and email the Director of the MS Program and Graduate Program Assistant about the intent to graduate.

Spring Quarter (Year 2)

By Deadline on Academic Calendar – Complete Application for Degree.

Throughout – Perform research.

Before submitting Master’s Completion Form - Hold the defense.

By 1 Week prior to Deadline on Academic Calendar – Complete the Master’s Completion Form after completing defense and submitting thesis or first-author paper (with proof of submission) signed by the student’s committee members.

The Combined BS/MS Degree for Northwestern Undergraduates

There are two programs that offer combined BS/MS degrees to Northwestern undergraduates. Details of the requirements for the undergraduate degree and the determination of which courses count for undergraduate study and which courses for graduate study are determined by the McCormick Undergraduate Engineering Office, BME, and the Graduate School.

The first program is available to all students in McCormick. Students must have fewer than 4 courses remaining in their BS to apply. Also, students must have a GPA >3.0; however, a GPA of 3.0 does not guarantee admission.

Students entering this program may complete the course-based MS or the MS with thesis. The complete course-based program can be completed in four or five years, although five years is recommended.
graduate requirements for the thesis and non-thesis BS/MS programs are the same as detailed above with the following side note:

- Northwestern University students completing their BS in Biomedical Engineering do not need to take the Physiology (401, 402, or 403) sequence. Instead, they must take advanced life sciences courses approved by the Director of the MS Program.

The second program is an accelerated, thesis-based program for outstanding undergraduates who have established research relationships with BME faculty members.

Admission requirements (no exceptions):

- 3.5 grade point average or higher in undergraduate studies
- have conducted at least two quarters of undergraduate research (399 or paid research) with chosen advisor
- approval by Director of the MS Program

Accelerated BS/MS Degree with Thesis

The graduate requirements for the accelerated BS/MS programs (with thesis) are as follows:

1. Completion of at least six 300 or 400-level graduate courses for a letter grade (i.e. P/N courses are not accepted) and none of these courses can be a 499 (research credit). The student must also take 3 units of BME499. No more than 3 courses can be taken during the last year of study, and preferably only one or two courses will be taken. (This is to allow a focus on completion of research during the final year). These courses must include a core curriculum of:

   (i) One advanced statistics course: Note that students should review course syllabi to avoid repeating courses similar to those taken at the undergraduate level.

   (ii) Three quantitative science and engineering courses as outlined above.

   (iii) Of the remaining courses, at least 1 must be an engineering or science course that complements other coursework. Courses in the following areas may not count: global health (except BME380), business, design, seminar, NUvention (except 1 quarter of NUvention Medical) or survey courses. NUvention Medical is a two-quarter sequence where one quarter may count as an engineering course. The second quarter would fulfill a course in category (iv).

   (iv) The remaining course may be any graduate level course that complements the student’s coursework and research including global health, business, and design courses. This “restricted elective” course must be approved by the Director of the MS Program.

2. All students are required to take Responsible Conduct of Research Training, within their first year in the MS portion of the program.

3. All students are required to complete 3 quarters of BMD_ENG 512. Upon petition to the Graduate Committee, a student may be exempt from one quarter of BMD_ENG 512 if the student is enrolled in a class that meets in conflict with BMD_ENG 512. Exemption will require the student to complete additional work related to the topics covered during the class.

4. Students must determine the appropriate deliverables for each BME499 course. The deliverables must be submitted prior to the grade being awarded.

5. Students are required to complete and defend a Master’s thesis to satisfy the requirement for a comprehensive exam. An examination committee for an MS thesis consists of at least three faculty members with one, including the chair, from the department’s core faculty, a minimum of two, including the chair, from The Graduate School faculty, and a minimum of two who are full-time
members of the Northwestern faculty. Committee formation and update meeting should be held at least the quarter before the graduation quarter. The committee must sign a copy of the committee update slides and the student should upload to GSTS.

6. An acceptable dissertation resulting from original research must conform to requirements set forth by TGS. An alternative deliverable is a submitted (but not necessarily approved) first-author publication with proof of submission. The dissertation or submitted journal article must be uploaded to GSTS prior to submitting the Master's Completion Form.

7. For more information about thesis procedures, please see the “MS Degree with Thesis” section above.

**Grades**

No P/N registration will be accepted. A grade point average equal to a 3.0 is required for graduation for a Master degree. A student whose overall grade average is not above a 3.0 is not meeting academic standards and will be placed on probation. Failure to remedy that situation may lead to dismissal by The Graduate School or the Biomedical Engineering Department.

An incomplete grade (Y or K) for any course must be removed within one year of the official ending of the course.

**Registration**

Registration details and recommended patterns of registration can be found on the [Graduate School website](#).

**TGS 588 Resident Masters Study (applies to most post-residency MS students)**

This registration is available for MS-only students who have completed at least 3 quarters of full-time, full-tuition registration toward the MS degree and need to maintain full-time registration status. This may be taken with a course or two. (Three or four classes allow for full-time status.)

**TGS 512 Continuous Registration**

Required for all students who have complete coursework and are continuing in their degree programs and are not registered in program coursework or any other TGS course (500, 588,).

International students must be enrolled full-time at all times except in cases of academic difficulties, medical problems, or if they are in their last quarter at Northwestern; students who are in any of these circumstances and need to take a reduced course load must request a “reduced course load” accommodation from the International Office. Summers are not required for registration/visa purposes.

**Financial Aid**

There are no funding opportunities for MS students. All full-time graduate students in good academic standing are eligible to apply for student loans. These loans are provided by the combined efforts of the federal government, Northwestern, and cooperating financial institutions, and should be regarded as supplemental financial resources rather than the primary means of financing advanced degrees.
Master’s students are charged tuition per course. For loan purposes, they must be at least half-time enrolled (2 credits per quarter) in order to be eligible for federal loan assistance. Students who are enrolled less than 2 units per quarter may apply for private loans.

Graduate students should contact Student Financial Services if they have questions regarding loans eligibility, registration requirements and available options.

**Satisfactory Academic Progress**

The Graduate School requires: at least a 3.0 GPA; students carry no more than 3 Y/X grades. Students with a GPA of <3.0 will be placed on academic probation. Students who are placed on academic probation by TGS ([http://www.tgs.northwestern.edu/about/policies/satisfactory-academic-progress.html](http://www.tgs.northwestern.edu/about/policies/satisfactory-academic-progress.html)) and unable to remediation during the probationary period will be excluded at the end of the second quarter of probation. Master’s students must meet their degree deadlines within 5 years from matriculation or they will be excluded from the program. All academic-based exclusions are made by the BME graduate committee and/or TGS. For more information about the appeals process for those students who are placed on probation or excluded (dismissed), please refer to the TGS’s website: [http://www.tgs.northwestern.edu/about/policies/satisfactory-academic-progress.html](http://www.tgs.northwestern.edu/about/policies/satisfactory-academic-progress.html). Each student’s academic progress is reported annually by the BME department to the student and to TGS through the Graduate Student Tracking System (GSTS).

**Degree Completion and Graduation**

Graduation procedures for both thesis and non-thesis students are as follows:

- Review the academic calendar for the deadline for the Application of Degree and Master’s Completion Form. The internal deadline for the Master’s Completion form is one week prior to the TGS deadline to allow for internal departmental review and approval by the Graduate Program Assistant. Both the Application for Degree and the Master’s Completion form are to be completed through CAESAR.
  - [https://www.registrar.northwestern.edu/calendars/academic-calendars/index.html](https://www.registrar.northwestern.edu/calendars/academic-calendars/index.html)
- **Departmental Review includes:**
  - Confirmation that all degree requirements have been met (i.e., coursework, etc.)
  - Confirmation that the student has at least a 3.0 cumulative GPA and that X, Y, or NR grades have been resolved.
  - **For Thesis Students:**
    - Confirmation of completed committee update meeting:
      - Students must upload the committee meeting slide deck with committee signatures to GSTS under “Documents”.
    - Confirmation of successful defense:
      - Students should have the committee sign the cover page of the thesis (or defense slide deck if the student submitted a first-author paper instead of writing a thesis). The student should upload the signatures to GSTS with the completed thesis or submitted, first-author paper with proof of submission under “Documents”.
  - **For Non-thesis Students:**
    - Confirmation of Project Courses:
- The student should upload 3 project deliverables (slides for 20-min presentation or 10+ page paper) to GSTS under “Plan of Study” tab.
- Completion the Master’s Completion Form in CAESAR:
  - The student should indicated Eric Perreault as the chair and Matthew Glucksberg as the co-chair on the form. Please check the “No Thesis Required” box.